

1. A processing system to control routing for a user communication, wherein the processing system is external to communication systems that transfer the user communication, and wherein the processing system is coupled to the communication systems over control links, the processing system comprising:

5 a signaling platform configured to receive telecommunication signaling information for the user communication;

 an application platform configured to process a called number data structure, a routing data structure, and the telecommunication signaling information to select an identifier for placement in a header of the user communication, and to generate a control instruction indicating the identifier;

 a control platform configured to transfer the control instruction indicating the identifier over one of the control links to one of the communication systems; and

 wherein the one communication system places the identifier in the header of the user communication, wherein at least some of the communication systems route the user communication based on the identifier in the header, and wherein the processing system is external to the communication systems that transfer the user communication.

2. The processing system of claim 1 wherein the application platform is configured to process a caller number data structure to select the identifier.

3. The processing system of claim 1 wherein the application platform is configured to process a connection data structure to select the identifier wherein the connection data structure includes data related to an originating connection for the user communication.

4. The processing system of claim 1 wherein the application platform is configured to process a query/response data structure to select the identifier wherein the query/response data structure provides access to a call processing data base.

5

5. The processing system of claim 1 wherein the telecommunication signaling information comprises Initial Address Message information.

6. The processing system of claim 1 wherein the application platform is configured to select echo control for the user communication, and to generate the control instruction indicating the echo control.

7. A method of operating a processing system to control routing for a user communication, wherein the processing system is external to communication systems that transfer the user communication, and wherein the processing system is coupled to the communication systems over control links, the method comprising:

5 receiving telecommunication signaling information for the user communication into the processing system;

in the processing system, processing a called number data structure, a routing data structure, and the telecommunication signaling information to select an identifier for placement in a header of the user communication;

in the processing system, generating a control instruction indicating the identifier;

transferring the control instruction indicating the identifier from the processing system over one of the control links to one of the communication systems; and

wherein the one communication system places the identifier in the header of the user communication, wherein at least some of the communication systems route the user communication based on the identifier in the header, and wherein the processing system is external to the communication systems that transfer the user communication.

8. The method of claim 7 further comprising, in the processing system, processing a caller number data structure to select the identifier.

9. The method of claim 7 further comprising, in the processing system, processing a connection data structure to select the identifier wherein the connection data structure includes data related to an originating connection for the user communication.

10. The method of claim 7 further comprising, in the processing system, processing a query/response data structure to select the identifier wherein the query/response data structure provides access to a call processing data base.

5

11. The method of claim 7 wherein the telecommunication signaling information comprises Initial Address Message information.

12. The method of claim 7 further comprising, in the processing system, selecting echo control for the user communication and generating the control instruction to indicate the echo control.

13. A software product to direct a processing system that receives telecommunication signaling information for a user communication to control routing for the user communication, wherein the processing system is external to communication systems that transfer the user communication, and wherein the processing system is coupled to the communication systems over control links,
 5 the software product comprising:

data structures indicating called number data and routing data;

software configured to direct the processing system to process the data structures and the telecommunication signaling information to select an identifier for placement in a header of the user communication, to generate a control instruction indicating the identifier, and to transfer the control instruction over one of the control links to one of the communication systems, wherein the one communication system places the identifier in the header of the user communication, wherein at least some of the communication systems route the user communication based on the identifier in the header, and wherein the processing system is external to the communication systems that transfer the user communication; and

15 storage media that stores the software and the data structures.

14. The software product of claim 13 wherein the software is configured to direct the processing system to process a caller number data structure to select the identifier.

20 15. The software product of claim 13 wherein the software is configured to direct the processing system to process a connection data structure to select the identifier wherein the connection data structure includes data related to an originating connection for the user communication.

16. The software product of claim 13 wherein the software is configured to direct the processing system to process a query/response data structure to select the identifier wherein the query/response data structure provides access to a call processing data base.

5 17. The software product of claim 13 wherein the telecommunication signaling information comprises Initial Address Message information.

18. The software product of claim 13 wherein the software is configured to direct the processing system to configured to select echo control for the user communication and to generate the control instruction indicating the echo control.